



OGMCOAL DNR <ogmcoal@utah.gov>

Fwd: Crandall Canyon Reclamation Plan-USFS response

1 message

Steve Christensen <stevechristensen@utah.gov>
To: OGMCOAL DNR <ogmcoal@utah.gov>

Wed, Sep 30, 2020 at 10:02 AM

Crandall Cyn correspondence

----- Forwarded message -----

From: **Salow, Jeffrey - FS** <jeffrey.salow@usda.gov>

Date: Wed, Sep 30, 2020 at 7:17 AM

Subject: RE: Crandall Canyon Reclamation Plan-USFS response

To: Jensen, PJ <pjensen@acnrinc.com>

Cc: Amanda Daniels <amandajdaniels@utah.gov>, Steve Christensen <stevechristensen@utah.gov>

Hi PJ,

Thanks for taking the time to discuss the proposed Crandall Canyon Mine final reclamation plan yesterday. The plan to remove the surface water retention pond concurrently with the rest of the site re-contour and grade construction seems reasonable and I think this is the best path forward for the site reclamation plan. The techniques proposed should help reduce erosion and sedimentation to Crandall Creek, however I do think the site will need to be closely monitored to ensure site stability is maintained while vegetation takes hold. The Flexterra hydromulch used during interim seeding also sounds like a good method when stabilizing Crandall Creek banks and slopes. Thank you for the case studies.

Please let me know if there is anything I can do to help further assist with this project or if there are questions or concerns.

Thanks,

Jeff

435-299-0561

From: Jensen, PJ [mailto:pjensen@acnrinc.com]**Sent:** Friday, September 25, 2020 11:31 AM**To:** Salow, Jeffrey - FS <jeffrey.salow@usda.gov>**Cc:** Amanda Daniels <amandajdaniels@utah.gov>; Madsen, Karin <kmadsen@acnrinc.com>**Subject:** Crandall Canyon Reclamation Plan

Hi Jeff,

I've been working with Priscilla Burton with the Division of Oil, Gas and Mining regarding our sediment control plan for the steep slopes that will not be pocked at the Crandall Canyon mine site. The plan now includes the application of interim seeding and PAM-12 Plus as the existing in-

situ soils are exposed. We will also install sediment logs at a maximum of vertical 10.0 feet in elevation as we progress. The restored slopes south of Crandall Creek will not be pocked due to their steep slope. The restored slopes north of Crandall Creek that are less than 1.5H:1V will receive pocking. Steeper slopes will receive similar treatment as the slopes south of the creek. Silt fences will also be installed on either side of Crandall Creek to catch any sedimentation that does make its way past the other sediment control systems. After all of the slopes have been restored, reinvigorated, seeded, received PAM-12 Plus where appropriate, pocking where appropriate, and sediment logs where appropriate, the entire site will be hydro seeded and hydromulched utilizing Flexterra by Profile Product to control sediment loss. The Flexterra hydromulch has a greater than 99% success rate at sediment control, even on slopes steeper than 1:1, and the manufacturer states that it should remain viable for approximately 18 months. By that time, the vegetation should be established and growing.

I have attached that portion of our reclamation plan, from Appendix 5-22 of our Mine Reclamation Plan, which discusses the restoration of the existing slopes. We also have the following in Appendix 5-22:

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"14. Revegetation - South Slope of the Expansion Area

Revegetation procedures for the South Slope of the Expansion Area involve a four step program: 1) application of fertilizer (if laboratory testing indicates a need), 2) hydroseed utilizing the seed mix found in Appendix 3-6, 3) hydromulch the entire area with a wood fiber mulch to stabilize soil during vegetative growth and control runoff, 4) plant containerized stock to further stabilize the soil and provide vegetative diversity. Hydroseeding will combine the tackifier and small amount of mulch with the seed mix (to mark the area of coverage) during application to the redistributed topsoil. All seed utilized on the site will be certified pure live seed. After the seeding step, the mulch (wood fiber and hay/straw) and tackifier will be applied to the seedbed surface. Hydroseeding and mulching operations will be conducted as soon as an area's seed bed is prepared. These operations shall be coordinated to allow access to all areas for equipment. The plant containerized stock will be planted in the second year of reclamation. Revegetation work will not be done until fall (September-October).

Genwal has committed to adding nutrients as determined by laboratory analysis conducted on existing topsoil samples taken as soil materials are exposed. The method used to ensure adequate and representative samples from different locations and depths within the existing topsoil layer include: taking two soil samples per lift and collecting samples with a soil auger at two foot increments. Samples of the undisturbed soil adjacent to the regraded site will also be taken for a baseline chemical reference. Fertilizer will be added to the existing topsoil, prior to seeding, if a need is indicated by laboratory results. The fertilizer will be spread on the existing topsoil and hand-raked into the soil."

I have also attached for your reference a copy of our reclamation plan (Plate 5-17), reclamation profiles (Plate 5-17a), final reclamation sediment control plan (Plate 5-17b), and the detail showing the installation of sediment logs on the steeper slopes (Plate 5-17c). The full Appendix 5-22 and the attached plates are part of our full submittal to DOGM. The text and drawings have been developed with the cooperation of and reviewed by representatives from UDOGM.

All of this is in anticipation of removing the sediment pond from the mine site at the same time we do the rest of the reclamation work, in lieu of the sediment pond remaining for at least one year. Please let me know if you have any questions or concerns regarding our sediment control and/or reclamation plan. I would be happy to answer any questions you may have, or provide any additional information.

Please let me know if this plan satisfies your concerns regarding the removal of the sediment pond as soon as you can. UDOGM has given us a deadline of October 10 to resolve all of the reclamation plan deficiencies. With this issue being one of those issues, I look forward to working with you and the Forest Service to resolving any and all concerns to the best of my ability.

Thanks for your help!

PJ Jensen

Engineering CADD Technician

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